

# JOINT MANAGEMENT PLAN REVIEW DRAFT ACTION PLAN: Wildlife Disturbance-

Marine Mammals, Seabirds & Turtles

REVISED: May 21, 2003

Please Note: The MBNMS and the Sanctuary Advisory Council have tasked the management plan working groups with development of draft action plans that characterize the issue or problem and identify strategies and activities that address the issue. The working groups will develop these strategies and activities over the next several months. With this goal in mind, the progress of the group, the decisions, and areas of agreement will be outlined in a progressively developed action plan identifying draft goals, issue characterizations, and strategies and activities. Members of the group as well as other interested parties should look to this draft action plan as it develops as a way of tracking the group's progress and decisions.

#### Introduction

The Sanctuary has one of the most diverse and abundant assemblages of marine animals in the world, including six species of pinniped, twenty-seven species of cetacean, four species of sea turtles, ninety-four species of seabirds and one species of sea otter (fissiped). Nearly all of the mammal and turtle species, and many birds, are protected under the Endangered Species Act, Marine Mammal Protection Act or Migratory Bird Treaty Act.

The Sanctuary is mandated to approach resource protection from a broad, ecosystem based perspective. This requires consideration of a complex array of habitats, species, and interconnected processes and their relationship to human activities.

The Monterey Bay National Marine Sanctuary has been dubbed "the Serengeti of the Sea", because so many large diverse animals are very easy to view and accessible to humans. Shorelines and offshore waters provide many opportunities for wildlife viewing, including whale watching, bird watching, observation of pinniped pupping, haulout activities, and tidepooling. With the multitude of opportunities for observing and interacting with nature comes the potential for wildlife disturbance which may result in impacts on marine resources such as: flushing of birds from nesting sites, pinnipeds abandoning pups, harassment or even death to wildlife. Certain recreational activities such as kayaking or boating, and some commercial activities such as low flying aircraft, whale watching operations, and fisheries interactions have the potential to harm or disturb marine mammals and seabirds.

Page 2 of 28

Public awareness is necessary to effectively address wildlife disturbance issues since most people who choose to view marine wildlife do not intend to place the animals or themselves at risk. While it has been well established that it is harmful and dangerous to closely approach, handle or feed terrestrial wildlife (e.g., bears, deer, raccoons, nesting birds, etc.), many people do not yet seem to understand that these concerns also apply to marine wildlife.

#### **Types of Wildlife in the MBNMS**

The MBNMS is known both nationally and internationally as a veritable 'hot spot' for viewing marine life. There is significant interest and public participation in activities found in the region that offer wildlife viewing. Following is a description of wildlife species present in the MBNMS which are subject to disturbance.

#### **Cetaceans:**

Of the twenty-seven species of cetaceans seen in the Monterey Bay area, about one-third occur with frequency. Of these twenty-seven species of whales, five are listed as endangered: the Blue, Fin, Humpback, Right, and Sperm. The highest concentration areas of cetaceans are within the central and southern portions of the MBNMS.

#### **Pinnipeds:**

There are a total of nine rookeries/colonies in the MBNMS. The five species of pinnipeds considered common in the Monterey Bay area include California sea lions, Steller sea lions, Northern elephant seals, Northern fur seals, and Pacific harbor seals. An additional species, the Guadeloupe fur seal, has been reported from records of sick animals stranded on the beach.

#### Seabirds and shorebirds:

Sanctuary waters are among the most heavily used by seabirds worldwide. Ninety-four species of seabird are known to occur regularly within and in the vicinity of the Sanctuary, and approximately ninety species of tidal and wetland birds occur on the shores, marshes, and estuaries bordering Sanctuary waters.

Several environmental features are responsible for the diverse assemblage of birds in the area, such as the Monterey Bay being located on the Pacific Flyway, allowing migratory birds a place to stopover during both north and south migrations between southern wintering grounds and northern breeding sites. The upwelling of nutrient-rich waters support highly productive food webs which provide abundant seabird prey, as well as the diversity of habitat types along the shore which increases the variety of bird species

Page 3 of 28

utilizing the MBNMS. Thus, many birds found in Sanctuary waters have come to feed, some from as far as New Zealand, often from nearby rookeries at the Farallon Island or Big Sur.

### **Fissipeds:**

The California or Southern sea otter is a threatened species that is found throughout the shallow waters of Monterey Bay National Marine Sanctuary, with its broader range stretching from the Gaviota Coast in Santa Barbara County to Half Moon Bay in San Mateo County. Sea otters inhabit a narrow zone of coastal waters, normally staying within one mile from shore. They forage in both rocky and soft-sediment communities as well as in the kelp understory and canopy. They seldom are found in open waters deeper than 30 m, preferring instead the kelp beds, which serve as vital resting, foraging, and nursery sites. Otters are an important part of the marine ecosystem. By foraging on kelpeating macroinvertebrates (especially sea urchins) sea otters can influence the abundance and species composition of kelp assemblages and animals within nearshore communities (Riedman, 1987).

#### **Turtles:**

The MBNMS is home to four species of sea turtles that frequent its waters —the Green, Pacific Ridley, Leatherback and Loggerhead sea turtles. The Leatherback is the most common. It is the largest turtle in the world and has the widest geographic range of any reptile. It is found in all of the world's major oceans and has been observed from the Artic Circle to the edges of the Antarctic convergence zone. Leatherbacks are also one of the deepest diving animals known—descending to depths in excess of 1,300 meters. Leatherback turtle populations in the Pacific Ocean are declining at a disastrous rate. Since 1980 populations have dropped by more than 90%, and the accidental killing of leatherbacks by high seas commercial fishing fleets is a major contributor to that decline.

#### **Endangered Species:**

Of the more than 116 federally listed threatened or endangered species (55 percent of all species nationwide) in California, twenty-six reside within the Sanctuary.

For additional information on species found within the Sanctuary visit the MBNMS site characterization at: http://montereybay.nos.noaa.gov/sitechar/welcome.html

#### **Potential Disturbance Activities within the MBNMS**

Over the last twenty years, increasing numbers of people have been seeking opportunities to view and experience marine wildlife. For the most part, wildlife viewing has resulted in many positive benefits including new economic opportunities for local communities,

Page 4 of 28

and increased public awareness and stewardship for marine resources. However, there is growing evidence that marine wildlife can be disturbed and/or injured when viewing activities are conducted inappropriately. Disturbance or injury also occurs through commercial harvest activities.

Frequent disturbance can adversely affect marine species. The effects of disturbance can be especially critical during sensitive time periods, such as feeding, breeding, resting, or nesting. Disturbance is likely to cause avoidance reactions and may result in interruptions of social behavior of animals and is capable of leading to long-term changes in distribution.

#### **Motorized and Non-motorized Vessels:**

The use of motorized or non-motorized vessels (outboard or inboard boats, kayaks, canoes, underwater scooters, or other types of water craft) to interact with marine mammals in the wild is a rapidly growing activity nationwide. For example, NOAA FISHERIES and the MBNMS have received complaints from members of the public that include operators of motor vessels driving through groups of dolphins in order to elicit bow-riding behavior, whale watching vessels getting too close to whales or chasing animals in order to get a better view of them, and kayakers utilizing the quiet nature of their vessels to approach too close to sea otters and harbor seals. Also, fatal blunt trauma injuries to sea otters suggest that they are being hit by small boats particularly in areas near Elkhorn Slough and harbors. All of these actions cause animals to exhibit avoidance responses resultant from the interactions.

#### **Fireworks:**

Fireworks displays over the Sanctuary have been traditionally conducted as part of national and community celebrations and foster public use and enjoyment of the marine environment. However, fireworks displays cause unacceptable levels of disturbance in certain areas. The MBNMS has worked with the National Marine Fisheries Service and the US Fish and Wildlife Service in developing solutions to this issue; it is expected that final implementation of those guidelines will occur in 2003. Traditional community fireworks displays will be allowed to continue at the existing locations, but there will be constraints on the number allowed per year, as well as designated zones where fireworks will be prohibited.

### **Overflight Impacts:**

Potential impacts from low-flying aircraft are addressed by a specific prohibition on flying under 1000 feet in designated overflight zones with sensitive wildlife. Some implementation problems have occurred due to pilot's lack of understanding and acknowledgement of the zones since they are not noted on aeronautical charts. MBNMS has begun an outreach campaign to pilot associations on the zones and the impacts of low

Page 5 of 28

flights, and is working to include notations on the FAA aeronautical charts. Additional outreach may be required to reach aviation companies which may be conducting whale watching trips within the Sanctuary Overflight Restriction Zones. This activity is also known to cause animals to exhibit avoidance responses resultant from the interactions.

#### **Commercial Harvesting and Aquaculture Activities**

Commercial harvesting of certain fish and kelp resources may result in varied types of disturbance to wildlife. The use of nighttime lighting in the commercial squid fishery may disturb certain seabirds such as pelicans, petrels, and auklets as well as sea otters by disrupting natural behavior. Kelp harvesting may involve potential disturbance of various fauna associated with the kelp ecosystem. Certain species such as sea otters could be prone to harassment by harvesting operations in the kelp beds. Certain methods of aquaculture can result in harm or mortality to seabirds. Pens used for rearing juvenile species can trap seabirds attracted to the contents thereby resulting in injury or death.

#### **How Does the MBNMS Currently Address Wildlife Disturbance?**

MBNMS addresses wildlife disturbance through a mix of educational outreach, regulations and enforcement. Sanctuary regulations explicitly prohibit harassment of marine mammals (as defined under the Marine Mammal Protection Act), sea turtles and birds. Other Sanctuary regulations relating to wildlife disturbance include restrictions on flying motorized aircraft below 1,000 feet in three designated sensitive areas, a prohibition on attracting white sharks, and restrictions on the use of motorized personal watercraft. Non-regulatory measures are also used by the Sanctuary to address wildlife disturbance, and include a variety of education and outreach activities and products.

There are several docent programs in high visitor use areas in the MBNMS. Some programs have been enacted to address concerns at specific locations such as the State or County Parks Programs at Point Lobos and the Fitzgerald Marine Reserve, other docent programs are more regional. Below is a description of MBNMS programs that enlist the help of specifically trained and educated volunteers.

#### **Team OCEAN:**

An effort to address the disturbance of marine mammals and seabirds by recreational users of the Sanctuary was launched by the Sanctuary during the fall of 2000, and is now in its third year. The Team OCEAN summer outreach program employs on-the-water education efforts for the Monterey Peninsula and in Elkhorn Slough to prevent kayakers from approaching marine mammals such as sea otters too closely. Similarly, the Sanctuary has assisted in reducing harassment of the elephant seal population at Piedras Blancas, a location very near the highway where tourists were closely approaching the animals. These efforts have included assisting local nonprofit organizations in

Page 6 of 28

establishing an observer and docent network for the elephant seal haulout sites to facilitate observation opportunities at safe distances and locations, and improving interagency enforcement for cases where an educational approach has not sufficed.

#### **Beach COMBERS:**

In 1997 a volunteer beach-monitoring program (Beach COMBERS: Coastal Ocean Mammal/Bird Education and Research Surveys) was established by the MBNMS and Moss Landing Marine Labs, to obtain information on rates of stranding for all Sanctuary marine birds and mammals. In addition, mortality events are detected, causes of mortality events are assessed, and oil and tar deposition is monitored. Some success stories to date include the discovery of banded birds from as far away as Hawaii; detection of unusually high numbers of dead adult harbor seals in localized areas; and a high deposition of Common Murres (a diving seabird), which led to the discovery of a previously unrecognized threat of gillnet mortality for Common Murres, harbor porpoise, and sea otters. The Beach COMBERS program has recently been expanded to Cambria, in the southern Sanctuary region. This program can help detect wildlife mortality patterns, although there often are a variety of possible causes of death.

#### Friends of the Elephant Seal:

The Friends of the Elephant Seal (FES) is a non-profit organization, formed in 1997. It is dedicated to educating people about elephant seals and other marine life and to teaching stewardship for the central coast of California. The organization puts volunteers through a comprehensive training program, using local experts. Volunteers work at the elephant seal viewing site year-round, and make over 150,000 contacts per year, with visitors coming from all over the world. The program redirects visitors to appropriate viewing sites and advises visitors of safe viewing practices. MBNMS has provided funding for signage at the main viewing site, and serves as an advisory member to the Board of Directors, participates in the docent trainings, and provides general assistance and support. Currently, the FES is without an Executive Director and does not have secure funding.

#### **BAYNET:**

BAYNET, an all volunteer, non-profit organization founded in 1996, is dedicated to the protection of natural resources and educating people about the wonders of the ocean and the living marine resources in California's Monterey Bay region. During the program's first four years, BAYNET volunteers spoke with more than 200,000 visitors from all over the world. In the year 2000 alone, BAYNET volunteers donated 1,700 hours of service. The MBNMS provides staff assistance and partial funding for the program. Recently, BAYNET lost the bulk of its funding and is actively seeking funding opportunities.

Page 7 of 28

#### Watchable Wildlife:

The Watchable Wildlife program is a unique partnership of federal and state wildlife agencies and non-profit organizations working to educate the public and commercial operators about safe and responsible wildlife viewing practices. The program has three immediate goals: (1) enhance public wildlife viewing opportunities; (2) provide education about wildlife and its needs; and (3) promote active support of wildlife conservation. Within NOAA, the National Ocean Service (through the National Marine Sanctuary Program) and the National Marine Fisheries Service (through the Office of Protected Resources) have been working together with the Watchable Wildlife program partners over the past five years to develop a "Watchable Wildlife" program specifically for marine species and habitats. The main purpose of the program is to provide the public with information about appropriate wildlife viewing practices for the marine environment that are consistent with wildlife protection laws and conservation efforts.

#### Regulations

Harassment within the Sanctuary is governed by a complex array of multi-jurisdictional laws and regulations such as the National Marine Sanctuaries Act, the Endangered Species Act, the Migratory Bird Treaty Act, and the Marine Mammal Protection Act. The following activities related to wildlife disturbance are prohibited within the Sanctuary: discharging materials (with certain exceptions); disturbing marine mammals sea turtles and birds; attracting white sharks; moving, possessing any historical resource, marine mammal, sea turtle or seabird; flying motorized aircraft below 1,000 feet in certain areas; and operation of jet skis outside of the four designated zones.

#### **Enforcement:**

The shoreline of the MBNMS is approximately 300 miles long. The MBNMS has one dedicated NOAA Office of Law Enforcement agent to respond to potential violations of Sanctuary regulations. As might be expected with one dedicated agent responsible for coverage of an area the size of Connecticut, this enforcement agent has limited capabilities.

The Sanctuary relies heavily on collaborations with other cross-deputized partners such as the Department of Fish and Game and the Department of Parks and Recreation to assist with Sanctuary enforcement. The MBNMS also funds a half-time law enforcement officer working in the Cambria area, who assists with enforcement issues during the elephant seal pupping season and collaborates with the Friends of the Elephant Seal docents.

Enforcement patrols by the California Department of Fish and Game and the California Department of Parks and Recreation for the year 2000 - 2001 were tabulated at 2444

Page 8 of 28

'patrol hours'. Each hour of enforcement patrol effort reflects the presence of an enforcement unit somewhere in the Sanctuary.

The MBNMS currently addresses some of these harassment issues through regulatory measures such as: prohibitions of white shark attraction, marine mammal and seabird harassment, over-flight restrictions for sensitive areas; as well as non-regulatory measures and other education and outreach efforts to minimize impacts to living marine resources. However, major disturbances to marine mammals and seabirds continue to be a major issue within the MBNMS and will be addressed in this Management Plan Review. A framework and strategies to address this issue will be incorporated and implemented as part of this site-specific action plan.

#### Goal of the Action Plan:

The goal of this action plan is to develop a program, with stakeholder input, to minimize disturbance of marine mammals, seabirds and turtles within the MBNMS.

# STRATEGIES OF THE WILDLIFE DISTURBANCE- MARINE MAMMALS, SEABIRDS AND TURTLES ACTION PLAN

Despite the initial efforts outlined above, many species in the Sanctuary warrant further protection via outreach, education, enforcement or other strategies designed to inform the public and specific user groups of the need to prevent wildlife disturbance within the MBNMS. The draft action plan developed by the Working Group provides a framework of protective measures for human interactions with marine mammals, seabirds, and turtles through wildlife viewing, commercial harvesting, and aircraft overflights in the Sanctuary. The initial phase will focus on identifying gaps in the existing system of protection and formulating a plan to jointly develop specific, more detailed, recommendations for those topics which have emerged as priorities.

# STRATEGY #1 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY VESSELS

This strategy recognizes the need to address the issue of disturbance by vessels. The following vessels are often a source of disturbance to seabird colonies, rookeries, haulout areas, or whales, when operating in sensitive areas: motorboats, whale watching vessels, kayaks, and military watercraft.

Page 9 of 28

Identify existing guidelines such as those generated by Watchable Wildlife, and adapting them to this area, where appropriate. Further develop and distribute these wildlife viewing guidelines for approaching seabirds, marine mammals, and turtles. Whale

ACTIVITY A: Finding, Modifying, and Developing Wildlife Viewing Guidelines

viewing guidelines for approaching seabirds, marine mammals, and turtles. Whale watching guidelines should be developed to mirror those produced by NOAA and used at the Hawaiian Island Humpback Whale National Marine Sanctuary (HIHWNMS). These model guidelines should be adapted to incorporate behavioral, seasonal, or species-specific guidance.

Wildlife viewing guidelines should be packaged in such a way as to focus on the behavioral stress patterns of the animal. Recommendations for vessel maneuvering should be included which outline how to avoid the animal from certain directions and speeds. These guidelines should also incorporate the penalties for harassment including any potential fines that may be incurred as a result of inappropriate interactions.

The MBNMS should conduct an assessment of the target audiences to determine the best ways to package and distribute guidelines. The information provided in the wildlife viewing guidelines handbook should also be synthesized into a one-page brochure, if possible, so that operators or users have a quick reference guide to consult easily.

The MBNMS website shall be further utilized to post information pertaining to wildlife observation. Website links may include: tourism bureaus, conservation groups, chambers of commerce, visitor's bureaus, natural history museums, aquaria, sport fishing companies, dive shops, private boating clubs, universities, research organizations, restaurants, tour operators, agency websites such as California Department of Fish And Game, California Department of Fish And Game, NOAA Fisheries, and hotels. Interested parties would be able to link directly to the posted information as a way to provide guidance to their customers. Hard copies of the Wildlife Viewing Guidelines should also be available at the above listed venues to ensure that they reach a large audience.

Project status: Phase 1

Potential partners: Watchable Wildlife, National Marine Sanctuary Program, NOAA Fisheries, State Parks, California Coastal National Monuments, NOAA Office of Law Enforcement, US Fish and Wildlife

### **ACTIVITY B: Continue and Strengthen Team Ocean Kayak Program**

Continue, strengthen, and expand the MBNMS Team OCEAN program, which educates on-the-water kayak users in an effort to prevent disturbance or harassment. Attach signage to kayaks, which will outline various marine species and guidelines for

Page 10 of 28

approaching them. This signage should include example photos of animals exhibiting avoidance behavior on the attached cards so that the kayaker will know if they are inciting harassment based on the reaction. These cards will further educate ocean users on animal behaviors which result from human interactions. MBNMS staff should conduct bi-annual evaluations with kayak companies to ensure that educational efforts are effective.

This signage should be distributed at boating supply stores, kayak shops, or other commercial venues. Additional training should be done to local kayak and scuba diving shops, in order to reduce adverse reactions in species of concern. These trainings should be complemented by the outreach and workshops which will be needed to promote wildlife viewing guidelines to a variety of user groups.

The Team OCEAN program should expand into other areas such as Santa Cruz and San Simeon to further the message of enjoying the Sanctuary without harassing the species which reside in it. The program should also expand to include interpretation to not just kayakers, but other boats as well.

Project status: Phase 1

Potential partners: Local kayak companies (rental/retail), Boating supply stores,

Harbormasters, Kayak publications, Elkhorn Slough at Kirby Park

### ACTIVITY C: Outreach and Promotion of Wildlife Viewing Guidelines to Boaters

The MBNMS should conduct an assessment of the most effective way to reach boaters with educational materials, and cater outreach accordingly. In this instance the target audience is: recreational boaters, divers, whale watchers, nature enthusiasts, and recreational fishermen. The MBNMS should expand outreach to boaters to educate them on wildlife observation guidelines, and vessel operation etiquette, including boat or propeller strikes to marine life as this issue is of concern. This outreach should include wildlife viewing workshops and distribution of handbooks which outline appropriate behaviors. Additional information should be posted at the launch ramps, parking areas, public restrooms, or fuel docks, however this may not reach a significant number of the intended audience. Guidelines should be made available, free of charge, for distribution at the harbormaster office and retail boating stores. Speed guidelines which are often posted in harbors should be augmented with information about sensitive species in the area, such as sea otters.

A Dock Walkers program, in which educators encounter users at the harbor and instruct them about wildlife viewing, should be enacted to supplement signage and should be implemented seasonally during high usage times.

Page 11 of 28

Consideration should be given as to how to best reach boaters from out of the area. The MBNMS should initiate collaboration with the CA Department of Motor Vehicles and provide them educational information to encourage it being enclosed with the vessel registration information that the Department sends out on an annual basis.

The California Department of Fish and Game often has biologists checking fish lengths and species information at the launch ramps. These biologists should be invited to participate in any trainings or workshops the MBNMS hosts so that they are able to provide information to the large number of recreational boaters and anglers they encounter.

Project status: Phase 1

Potential partners: California Department of Fish and Game, Department of Motor Vehicles, Fishing license distributors, Harbormaster/parking lots, US Fish and Wildlife, Save Our Shores, marinas, Defenders of Wildlife, Friends of the Sea Otter

# ACTIVITY D: Outreach and Promotion of Wildlife Viewing Guidelines to Whale Watching Vessels

Conduct training and outreach to vessel operators to ensure that operators are familiar with the parameters of the Marine Mammal Protection Act (MMPA), and operate their vessels within those confines. Workshops should ensure that operators of whale watching vessels are aware of the guidelines for wildlife viewing, and embrace those recommendations. The MBNMS should ensure that any handbooks that are developed for wildlife viewing are readily available to vessel captains. The MBNMS should provide evidence of workshops or trainings to participating whale watching captains, in the form of a certificate or sticker that could be posted aboard the vessel for those who are interested in receiving one.

Project status: Phase 1

Potential partners: Whale watch Companies, NOAA Fisheries, agency partners, Office of

Law Enforcement

# ACTIVITY E: Increased Inter-agency Consultation Between Other Federal Agencies:

Current regulations require other federal agencies to "consult" with the MBNMS when planning projects within Sanctuary boundaries. This is a formal process mandated by the MBNMS regulations. There is opportunity for improvement in this process when considering military activities that occur within the Sanctuary. Though "consultation" is

Page 12 of 28

required, the military often overlooks this requirement. Outreach to military environmental liaisons should be conducted to ensure that the military is well versed in MBNMS requirements, which will aid the MBNMS in being aware of various proposed projects. In addition, better overall coordination with Federal agencies could be achieved by improved communication.

The MBNMS should include federal agencies in annual trainings or workshops to ensure that boat operators and pilots are aware of sensitive marine species areas and overflight zones. This annual training is especially important for the US Coast Guard, as they seem to have high turnover rates. In turn, this training will better enable the US Coast Guard to collaboratively enforce MBNMS regulations.

The MBNMS should collaborate with Environmental Liaisons within federal agencies to ensure that detailed Geographic Information System (GIS) data outlining areas of concern is shared. This data would include species distribution, migratory corridors, seasonal patterns, etc. This information should be included in training and provided as an ongoing tool to better coordinate military training activity to avoid impacts. US Coast Guard pilots have the ability to download this information directly into their electronic flight planners.

Project status: Phase 1

Potential partners: US Coast Guard, military, US Fish and Wildlife, California Coastal

National Monument, US Geologic Survey, NOAA Fisheries

Page 13 of 28

# STRATEGY #2 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY LOW FLYING AIRCRAFT

This strategy recognizes the need to address and reduce the issue of disturbance by low flying aircraft. Low flying aircraft are known to cause seabirds, pinnipeds, and whales to exhibit avoidance responses resulting from the interactions. There are a variety of user groups associated with this activity, which may require different strategies in addressing the problem. The following actions and user groups are of concern: commercial film making flight operations, private non-profit aviation, military and agency (such as the US Coast Guard) aircraft, and other potential actions.

#### **ACTIVITY A: Resolution with the FAA**

Current aeronautical charts incorrectly list the MBNMS overflight restriction zones as being a 'recommendation' rather than a 'requirement'. Ensuring the correct verbiage and regulations are posted on the aeronautical charts is critical in an effort to inform pilots of the overflight restriction zones. The MBNMS should continue discussions and coordination with the NMSP headquarters who are working with the FAA legal staff to resolve this issue.

Project status: Phase 1

Potential partners: FAA, NMSPHQ, & MBNMS

#### **ACTIVITY B: Research and Monitoring**

An evaluation of key geographical areas should be undertaken to understand priority concern locations and disturbance frequency of these areas to assist in targeting needed outreach and enforcement. A list of desirable sites that the film industry is often interested in should also be evaluated and monitored for potential impacts. The MBNMS should canvas researchers for data regarding low flying aircraft interactions that they may have observed while conducting research in the field, and use this information to further hone areas that may be appropriate in conducting overflight filming operations. Consideration of potential impacts should be weighed for both fixed-wing aircraft and helicopters. There are inherent differences to the operating capabilities of these aircraft, and thus they cause different impacts to species of concern.

The MBNMS should continue to monitor and evaluate key sensitive areas within the overflight zones. It should also evaluate overflights at an area outside its zone on the San Mateo Coast. Devil's Slide rock hosts a colony of Common Murres, a seabird that has been heavily impacted by oiling events and the nearshore set gillnet fishery. In 1996 a 4.9 million dollar restoration project was implemented at this site through funding related

Page 14 of 28

to the tanker vessel Apex Houston oil spill. Since 1996, the Common Murre Restoration Project, led by the US Fish and Wildlife Service, in cooperation with NOAA and other state and federal agencies, has been using social attraction techniques to restore these colonies and habitat to fully sustain a healthy colony of seabirds. This seabird is particularly sensitive to low flying aircraft. Though this area is not within the current overflight restriction zones, it is likely not feasible for future inclusion due to San Francisco International and Half Moon Bay Airport's flight patterns. It is nonetheless important however, and should be a component of educational efforts and monitoring.

Project status: Phase 1

Potential partners: US Fish And Wildlife Service, Point Reyes Bird Observatory,

California Coastal National Monuments, research institutes

#### **ACTIVITY C: Outreach to Pilots**

The MBNMS should conduct an assessment of the most effective way to reach pilots with educational materials, and cater outreach accordingly. Strategies to address the above issues include a mix of educational outreach and enforcement. The MBNMS has conducted outreach to various pilot associations, by speaking to flying clubs and pilot associations. These efforts should be broadened to encompass a larger number of pilots on a regular basis. These user-groups should also be included in workshops which will be given on wildlife viewing etiquette, as current information suggests that pilots often conduct whale watching trips from aircraft. An educational poster should be developed for distribution to municipal airports, pilot training schools and flight schools, websites, aviation clubs, and other appropriate venues.

Brochures should be developed which outline the hazards created by low flying aircraft and distributed to appropriate users. A mass mailing of educational materials to registered aviators may be helpful in making pilots aware of Sanctuary concerns. Submittal of articles to *In Flight* magazine may be another avenue to pursue in the effort to reach pilots.

Project status: Phase 1

Potential partners: Pilot organizations, Training schools, flight clubs, publications (Inflyer, PacFlyer, AOPA), airports, recruiting of volunteer pilots, US Fish and Wildlife,

California Coastal National Monument

#### **ACTIVITY D: Coordination and Outreach to Film Commission**

Film companies are generally not aware of MBNMS regulations pertaining to overflight restriction zones. Outreach should be conducted to local filmmaking commissions to

Page 15 of 28

make them aware of the sensitive Sanctuary resources, and the appropriate optimal seasonal operation "windows" for certain highly sensitive areas. In addition to the Overflight Restriction Zones information, general outreach on other land or boat-based filming activities should be conducted. For instance, information on elephant seals, seasonal nesting areas, etc, would be appropriate.

At certain times of the year, aircraft have been permitted to conduct overflight operations below 1000 feet. These permits or authorizations are constrained or modified to ensure protection of MBNMS resources. In instances where permission may be granted, biologists will need to confirm that the selected areas are free of protected species. The MBNMS recommends that the film industry purchase the services of independent biologists to monitor these areas in advance of any permitting activity. Pending the results, sensitive areas will be avoided and areas that may be appropriate for low flying aircraft that will not cause harm to MBNMS resources, may be permitted.

Project status: Phase 2

Potential partners: County and State Film Commissions, Visitor and Tourism Bureaus, NOAA Fisheries, helicopter operation companies, State Parks, California Coastal National Monuments

#### **ACTIVITY E: Permit Guidance**

Advance coordination and development of seasonal restrictions in concert with other regulatory agencies would provide a useful guide for filming companies. The MBNMS should work with other agencies to develop these guidelines and distribute the information to interested parties. In this way, agencies and industry will be aware of seasonal and cumulative restrictions in advance, rather than reacting to various permit requests on a case-by-case basis. The agency guidance should include language which addresses aircraft type, altitude and location recommendations.

There are a few private airstrips along the Big Sur coast. Outreach should be conducted to the owners of these airstrips to determine if the need to conduct landing operations below the 1000-foot overflight restriction zone exists. Further evaluation is needed of the potential impacts to MBNMS resources from overflight activity based in this area to outline possible seasonal conditions to avoid impacts. If pilots request to fly beneath the overflight restriction zones for the purposes of landing their small private airplanes, the MBNMS should evaluate these requests on a case-by-case basis to determine the impact to resources The MBNMS may potentially allow certain uses of this sort, if appropriate, by issuing special use permits for the activity.

Though the MBNMS carefully modifies permitted overflight activities to ensure that there are not impacts to sensitive species, pilots are sometimes not aware of the permit



Page 16 of 28

conditions. The MBNMS should work with the Film Commission and film companies to ensure that pilots are fully aware of the permit conditions or restraints. This could be achieved by requiring pilots to be co-signers on permits, and to meet with the MBNMS Permit Coordinator in advance of permit issuance to ensure familiarity with the sensitive resources.

Project status: Phase 1

Potential partners: California Department Of Fish And Game, State Parks, US Fish and

Wildlife Service



Page 17 of 28

# STRATEGY #3 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY SHORE-BASED HARASSMENT

This strategy recognizes the need to address and reduce shore-based disturbance. Disturbance is known to cause seabirds, shorebirds, and pinnipeds to exhibit avoidance responses resultant from the interactions. There are a variety of species associated with this activity which may require different strategies in addressing the problem. All species of marine mammals are protected by the Marine Mammal Protection Act. Violation of the Act is also a violation of Sanctuary regulations; however, disturbances are frequently occurring. The MBNMS should conduct an assessment of the target audience in order to develop the best tools and materials to reach them. The recommendations are as follows:

#### **ACTIVITY A: Wildlife Viewing Guidelines**

Identify, modify or draft appropriate guidelines for shore-based interactions with species of concern. This will complement the efforts listed in Strategy #1.

Project status: Phase 1

Potential partners: BAYNET, docent outreach, non-profit groups, Save Our Shores, Ocean Conservancy, State Parks, Monterey Bay Aquarium, Friends of the Elephant Seal

#### **ACTIVITY B: Outreach**

The Friends of the Elephant Seal, BAYNET, or similar programs, should be strengthened to ensure that volunteers continue to be available to interact with the public. The MBNMS should support organizations (as appropriate) that conduct activities that reduce harassment to wildlife. Support may come in the form of signage, training, funding or other types of support. The MBNMS should also collaborate with programs such as Watchable Wildlife, and adopt some of those programs or tools where needed.

Signage at state parks, to complement docent programs, may be valuable placed in areas adjacent to assemblies of wildlife. The MBNMS should work with state parks and other sites that have intense visitor usage, to identify strategies to reduce wildlife disturbance. The MBNMS should author a regular column in a local newspaper which would outline various educational components for the general public. The articles should offer seasonal information on various species, viewing protocols, pollution reduction tips, or other items of interest.

Project status: Phase 1

Potential partners: BAYNET, Friends of the Elephant Seal, docent outreach, non-profit groups, Save Our Shores, Ocean Conservancy, State Parks, Monterey Bay Aquarium,

Friends of the Sea Otter

Page 18 of 28

### **ACTIVITY C: Remote Controlled Airplanes**

The MBNMS prohibits flying motorized aircraft below 1,000 feet within the Overflight Restriction Zones. The MBNMS also prohibits disturbing marine mammals, sea turtles and birds. Remote controlled airplanes incite this reaction. The existing definitions of aircraft subject to MBNMS regulation should be interpreted to include remote controlled planes so that they are prohibited within the Overflight Restriction Zones. The operation of remote controlled airplanes operating in areas of high seabird and shorebird concentration are of concern as they have the propensity to cause flushing events. This activity can be particularly problematic when conducted in areas such as Elkhorn Slough which hosts a significant number of Sanctuary resources. The MBNMS should investigate the frequency and effects of this activity, and where appropriate, work with local municipalities to ensure that the activity is not occurring in highly sensitive habitat areas. Signage and outreach should be in place to educate the hobbyists on potential impacts their actions may cause.

Project status: Phase 2

Potential partners: Point Reyes Bird Observatory, State Parks, US Fish and Wildlife

Service

#### **ACTIVITY D: Parasails and Hang Gliders**

Parasail activity is not prohibited by MBNMS regulations, however it is known to cause the disturbance of snowy plovers. The snowy plover is a small, federally threatened shorebird that nests and winters on the sandy beaches of the Monterey Bay. During spring and summer, snowy plovers nest and raise chicks from Sunset State Beach south to Marina, at the Moss Landing Wildlife Area, and at pocket beaches in northern Santa Cruz County. Recreational usage of parasails and hang gliders has some impact on the species. Though the snowy plover is a MBNMS resource, the MBNMS is not the lead agency mandated to protect the snowy plover, that responsibility falls upon the US Fish and Wildlife Service. The MBNMS should aid and encourage other agencies to evaluate this issue further to determine appropriate actions or recommendations for protection of this species in areas where parasails and hang gliders are of concern.

Project status: Phase 2

Potential partners: Point Reyes Bird Observatory, State Parks, US Fish and Wildlife

Service

Page 19 of 28

# STRATEGY #4 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY MARINE DEBRIS

Levels of debris in both the ocean and at the land-sea interface are of growing concern. This strategy recognizes the need to address disturbance by marine debris. Various types of debris are known to have adverse effects on marine species. Plastics in the marine environment never fully biodegrade. DDT and other hydrophobic compounds are known to adhere to plastics. Ingestion and entanglement are one of the many problems associated with marine debris, which may eventually lead to death for many organisms. Priority types of marine debris include balloons, abandoned/discarded fishing gear, plastics and styrofoam, and consumer goods including 6-pack rings, plastic shopping bags, etc. The MBNMS should conduct an assessment of the target audience in order to develop the best tools and materials to reach them.

Strategies to address the above issues include:

#### **ACTIVITY A: Education and Outreach**

Develop, adapt, conduct, or support an educational program which illustrates the problems associated with marine debris. Determine how to best make this information available to the general public for land based education and all boaters—including the military, cruise ships, large commercial vessels, and fishermen for ocean based education. While the focus of this strategy would be to address plastics in the marine environment, it will also remind people that cigarettes are also trash and a form of marine debris. The MBNMS should continue to engage the media in wildlife issues as they are a necessary outlet in increasing awareness of wildlife that have been adversely affected by debris, such as entangled animals. Publicity should be given to information about the location where pelagic plastics accumulate and the connection to both land-based and offshore actions. The MBNMS should evaluate sources of plastic debris and develop a targeted education program. The MBNMS should develop public service announcements that educate the public on the concerns and solutions to the issue. This public awareness strategy should fully integrate an educational component about marine debris into the campaign.

Project status: Phase 2

Potential partners: Fishing groups, recreational boaters, cities, watershed networks

#### **ACTIVITY B: Monitoring of Marine Debris**

The MBNMS will work with the Ocean Conservancy and the Coastal Commission to develop a database to track and characterize the type, location and amounts of marine debris collected through Coastal Cleanup efforts. Monitoring results will be integrated into the MBNMS SIMoN program.

Page 20 of 28

Project status: Phase 2

Potential partners: Ocean Conservancy, American Plastics Council, California Coastal Commission, Save Our Shores, Surfrider, State Parks, Cites, school groups, US Fish and

Wildlife Service

#### **ACTIVITY C: Balloon Education**

Balloons are often found at sea and have deleterious effects on various forms of marine species. Developing informational tags to be placed on commercial helium tanks and balloons, which illustrate the hazards of releasing balloons into the environment may reduce the instance of this form of marine debris. Information should also be provided to area businesses which make a regular practice of releasing balloons into the environment.

Project status: Phase 1: Identify and conduct outreach to commercial users
Phase 2: Identify and conduct outreach to private users
Potential partners: Santa Cruz boardwalk, local merchants, car dealerships, shopping centers, point of sale locations, schools, Public Service Announcements, Save Our Shores, non profits, and other environmental organizations

#### **ACTIVITY D: Notification of Abandoned Gear Recovery Program**

Abandoned or discarded gear could be reduced by implementing a notification and recovery program to collect fishing gear similar to the program created in the Northwest Hawaiian Islands in which derelict fishing gear is recovered. The MBNMS should also investigate other programs for strategies which address this need. Educational efforts to fishermen and other users regarding the adverse effects of lost gear and debris will be valuable in combating this form of debris.

The US Coast Guard will retrieve abandoned fishing gear if it is deemed to be a hazard to navigation. Gear that is not a navigation hazard is not recovered. The MBNMS should encourage the US Coast Guard to, where possible, recover derelict fishing gear, or assist in communication with others who could do so. The MBNMS should identify and enlist a network of partner organizations or individuals who are able to retrieve abandoned gear. Develop a notification system which the US Coast Guard, fishermen, researchers and other boaters can use to notify the recovery network of the locations of abandoned gear. The feasibility of developing a shore-side reward program for removal of gear that becomes washed up on beaches should be evaluated. An education component would be necessary to alert beachgoers of the recovery program.

Project status: Phase 2

Potential partners: US Coast Guard, fishing groups, diving organizations, California Coastal Commission, research institutions, and environmental organizations.



Page 21 of 28

#### **ACTIVITY E: Debris Reduction Efforts To Municipalities**

Local consumers, businesses, tourists, and residents should be made aware of the hazards associated with marine debris. Identification of the priority debris types could be valuable in formulating an educational approach to the issue. Education efforts, in general, have been found to be more effective at the source of the problem than endbased solutions. However, concerted educational efforts to municipalities should be conducted in order to urge various municipalities to install storm shields or catchment basins over storm drains. This would potentially reduce the amount of post consumer garbage from entering the ocean during times of dry weather. Many coastal municipalities conduct storm drain stenciling to heighten awareness about storm runoff by making individuals aware that the final receptacle for trash found on the street is the ocean. The MBNMS should work with municipalities, cities, and students on collaborative efforts to paint stencils on storm drains alerting others to this problem. Volunteer based creek cleanups conducted in advance of wet weather, have been found to reduced the amount of plastic and trash contribution to the Sanctuary. Programs of this sort should be supported by the MBNMS. Further education efforts are warranted to decrease the volume of trash found in the sea, as listed in Activity A.

Project status: Phase 2

Potential partners: Municipalities, cities, schools, Surfrider, and environmental groups



Page 22 of 28

# STRATEGY #5 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY COMMERCIAL HARVESTING RELATED ISSUES

This strategy recognizes the need to address disturbance by commercial harvesting related issues – the following list identifies potential issues the workgroup is concerned with:

- Light disturbance on pelicans, petrels, auklets, and sea otters from squid fishing
- Disturbance via kelp harvesters,
- Bycatch from fishing gear and aquaculture (turtles and seabirds)
- Nearshore fishery impacts to seabird colonies

# **ACTIVITY A: Evaluation Or Monitoring To Determine If Additional Solutions Are Needed**

The MBNMS should conduct monitoring activities to evaluate disturbance from kelp harvesting, lighting from squid fishing vessels, and aquaculture pens and gear entanglement. Potential solutions may include re-directing or shielding light sources in some fashion, and modifications to fishing gear and aquaculture pens to reduce bycatch and entanglement. An evaluation should be conducted to determine if aquaculture pens should be redesigned to reduce entanglement of seabirds.

Fishing boats have been observed inadvertently crossing paths with whales on occasion and in doing so, unintentionally snagging their gear on the animal when both fishermen and whales are focused on a concentrated feeding ground. The MBNMS should work with others to examine this issue more closely. An onsite enforcement officer should be made available to be present on the water at critical times of year.

The MBNMS should coordinate with other agencies to determine the times of peak concern for the above listed issues and respond accordingly. Fishermen should be invited to participate in the trainings and workshops which will be conducted to reduce harassment or disturbance to marine species.

Project status: Phase 2

Potential partners: California Department Of Fish And Game, Research, Point Reyes Bird Observatory, US Fish And Wildlife Service, NOAA Fisheries, fishing organizations

Page 23 of 28

# ACTIVITY B: Interagency Coordination On Bycatch Reduction of Marine Mammals, Sea Turtles and Birds

Marine species are known to be prone to hooking and entanglement in fishing lines, gillnets, buoy anchor lines, discarded fishing gear, and other equipment, which can lead to serious injuries or death.

The MBNMS should coordinate with NOAA Fisheries to ensure that levels of marine mammals, sea turtles, and bird bycatch and other fishery impacts are consistent with the resource protection goals of the Sanctuary. The MBNMS should investigate if NOAA Fisheries standards are consistent with Sanctuary goals. Investigation into other means of bycatch reduction should be conducted where appropriate.

Project status: Phase 2

Potential partners: California Department Of Fish And Game, Research, Point Reyes Bird Observatory, US Fish and Wildlife Service, NOAA Fisheries,



Page 24 of 28

# STRATEGY #6 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY ACOUSTICS

Noise levels in the marine environment have been increasing over the years. These increases are resultant from increased shipping traffic, sonar technologies, and research projects. The effects of noise on marine mammals, seabirds, and turtles is not entirely known, though active sonar has been conclusively linked to the deaths of whales in other areas. This strategy recognizes the need to address disturbance by acoustic impacts. Issues of concern include the effects of acoustics on marine mammals by ships, the military, research, or other influences.

#### **ACTIVITY A: Research And Monitoring**

Strategies to address the above issue include gathering more information and data on the effects of sound in the marine environment. The MBNMS should encourage passive acoustic monitoring in order to identify and quantify sources of anthropogenic noise. The MBNMS should continue to be apprised of survey and monitoring activities that are evaluating the effects of sound.

Project status: Phase 2

Potential partners: San Francisco State University, Stanford, Naval Postgraduate School, other research institutes, NOAA Fisheries, State Parks

#### **ACTIVITY B: Evaluation Of Individual Projects**

The MBNMS should continue evaluating individual proposals on a case-by-case basis to determine impacts of proposed projects, and make management recommendations. The MBNMS should work with others to determine acceptable sound levels in the different frequency ranges affecting wildlife. The MBNMS should work with others to maintain a database of acoustic characteristics of scientific and industrial equipment. Potential effects of acoustic disturbance are not entirely known for marine species, however there is a correlation between acoustics and marine mammal stranding events in other areas of the world.

Project status: Phase 1

Potential partners: San Francisco State University, Stanford, Naval Postgraduate School,

other research institutes, NOAA Fisheries, State Parks

Page 25 of 28

#### STRATEGY #7 REDUCE DISTURBANCE OF TURTLES

#### **ACTIVITY A: Evaluation Of The Issue**

Strategies to address the disturbance of sea turtles in the MBNMS include working with NOAA Fisheries on further evaluation of sea turtle tracking projects, evaluation of stranding data, and developing a program to identify common sea turtle disturbance or harassment activities.

The MBNMS will work with those involved in regional sea turtle research activities to determine primary threats, known disturbance activities, and strategies to reduce disturbance. Sea turtles are difficult to see from the water and are vulnerable to boat collisions and propeller strikes. Other known threats to turtles include the ingestion of garbage and marine debris such as plastic bags, styrofoam, balloons, and other plastics. These items can cause interference in metabolism or gut function as well being responsible for absorption of toxic byproducts. Contact with discharged oil can harm sea turtles by adversely affecting respiration, blood chemistry, and salt gland function. Ingestion of tar balls is also of concern.

The wildlife viewing guidelines for wildlife viewing should include information specific to sea turtle species found within the MBNMS. Information on sea turtles should be incorporated into the outreach program to be conducted for the benefit of whale watch vessels and other boaters.

Project status: Phase 1

Potential partners: Past partners on outreach, enforcement, state parks, California Department Of Fish And Game, California Coastal National Monuments, police, US Fish And Wildlife Service, non-profits, NOAA Fisheries, cruise ship industry

Page 26 of 28

# STRATEGY #8 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY ENFORCEMENT

This strategy recognizes the need to address disturbance by increasing both the on-thewater and on-land presence of Sanctuary enforcement in an effort to complement education efforts.

#### **ACTIVITY A: Strengthen Enforcement**

It is critical to strengthen the availability of surveillance and enforcement capabilities, and to increase the visibility of Sanctuary enforcement to enhance educational efforts. In recent years reports of Sanctuary violations have not fully reached fruition due to complex legal pathways. It would be beneficial to the Sanctuary if the option to write an offender an on-the-spot ticket were in place. The MBNMS should finalize and use a summary settlement process, which would allow tickets or fines to be levied on-scene to offenders. Enforcement of Sanctuary violations should be strengthened to ensure greater protection of the Sanctuary.

Partnerships with other state and federal agencies should be pursued to further protect Sanctuary resources. The MBNMS should improve inter-agency coordination on enforcement to leverage field efforts, including MBNMS, California Department of Fish and Game, State Parks, and local police.

Better coordination between MBNMS education and enforcement programs should be implemented. Criteria should be developed in order to decide when to use education or enforcement. The MBNMS should define a system of referrals from docents to the enforcement officer. This system should clearly define guidance on when to call in enforcement.

Project status: Phase 1

Potential partners: NOAA Fisheries, State Parks, Department of Fish and Game, non-

profits, Team OCEAN

### **ACTIVITY B: Regulatory Review**

The MBNMS should review the effectiveness and enforcement of existing laws and Sanctuary regulations since designation and take corrective actions where appropriate. Project status: Phase 2



Page 27 of 28

#### **ACTIVITY C: Outreach**

There is some confusion among members of the public as to what the MBNMS regulations are and who to contact in the event of a violation. The MBNMS should work with others regulatory agencies to develop and disseminate readily understandable information about complex regulations and multiple jurisdictions to the public and agencies. The MBNMS should develop coordinated training with enforcement personnel and docents on how to effectively report Sanctuary violations. The MBNMS should establish and promote a call-in system and infrastructure for the general public to report incidents for enforcement follow-up.

Project status: Phase 1

Potential partners: NOAA Fisheries, State Parks, Department of Fish and Game, non-

profits, Team OCEAN



Page 28 of 28

#### **Resolved Issue:**

#### Fireworks:

Firework displays over the MBNMS have traditionally been conducted as part of national and community celebrations, and foster public use and enjoyment of the marine environment. Firework displays also have the potential to cause unacceptable levels of disturbance to marine wildlife and habitats in some parts of the MBNMS and should thus be restricted from such areas.

The MBNMS is currently consulting with the US Fish and Wildlife Service and the National Marine Fisheries Service as required by the Endangered Species Act, Migratory Bird Treaty Act, and the Marine Mammal Protection Act.

The results of this consultation process are expected to yield guidance for the approval of MBNMS fireworks authorizations and will outline permit conditions and maximum number of fireworks allowed at various locations, including areas where fireworks will not be allowed.

